

A. TYPHOON KAREN (220000Z-251800Z APRIL 1960)

On 13 April, 9 days before the first warning was issued, TIROS I indicated an area of cloudiness in the vicinity of 5N 145E. Subsequent surface charts confirmed the existence of a cyclonic circulation in this area. This cyclone moved slowly W, passed S of Koror, and approached the Philippines. Insufficient data made accurate analysis difficult, but center pressures were believed to be no lower than 1005MB and maximum winds not greater than 20 kts. By 211200Z the cyclone was moving over the Philippines, and reports indicated that it was intensifying. Warning number 1 was issued at 220000Z on T. D. KAREN, at which time the cyclone was located slightly east of Cebu in the Southern Philippines.

KAREN intensified, moved NW, and passed 120 miles SW of Manila. The diameter of the storm remained very small, and sparse surface reports did not indicate that KAREN was of typhoon intensity. However, on the basis of reconnaissance, KAREN was upgraded to a typhoon at 241800Z. The typhoon then weakened as it recurved; and at 251200Z it was downgraded to a tropical storm and 6 hours later the final warning was issued.

Typhoon KAREN will probably be known in meteorological history as a "baby" typhoon since it had an eye diameter averaging only 10 mi. The radius of 50 kt surface winds never exceeded 30 mi, and the radius of 30 kt winds did not exceed 75 mi. This fact probably accounts for the rapid demise in spite of the large area of warm air surrounding the typhoon. This type of typhoon is characteristic of those intensifying off the W coast of the Philippines, but seldom are they tracked for such a distance to the E before intensifying into a typhoon. Without reconnaissance, it is quite probable that KAREN would never have been identified as a tropical circulation of typhoon intensity. Available surface reports show maximum surface winds of only 35 kts.

Sixteen warnings were issued covering a period of 3 days and 18 hours. KAREN traveled 800 mi at an average speed of 9 kts or 211 mi per day. The minimum speed was 7 kts on 24 April, and the maximum speed of 16 kts was achieved on 25 April.

Based on the winds aloft at Clark AB, the typhoon extended through the 300 mb level as a closed circulation when NW of that station at 241200Z.

BEST TRACK TYPHOON KAREN

22-25 APR 1960

Legend

6 HR BEST TRACK POSITS

▲ AIRCRAFT FIX

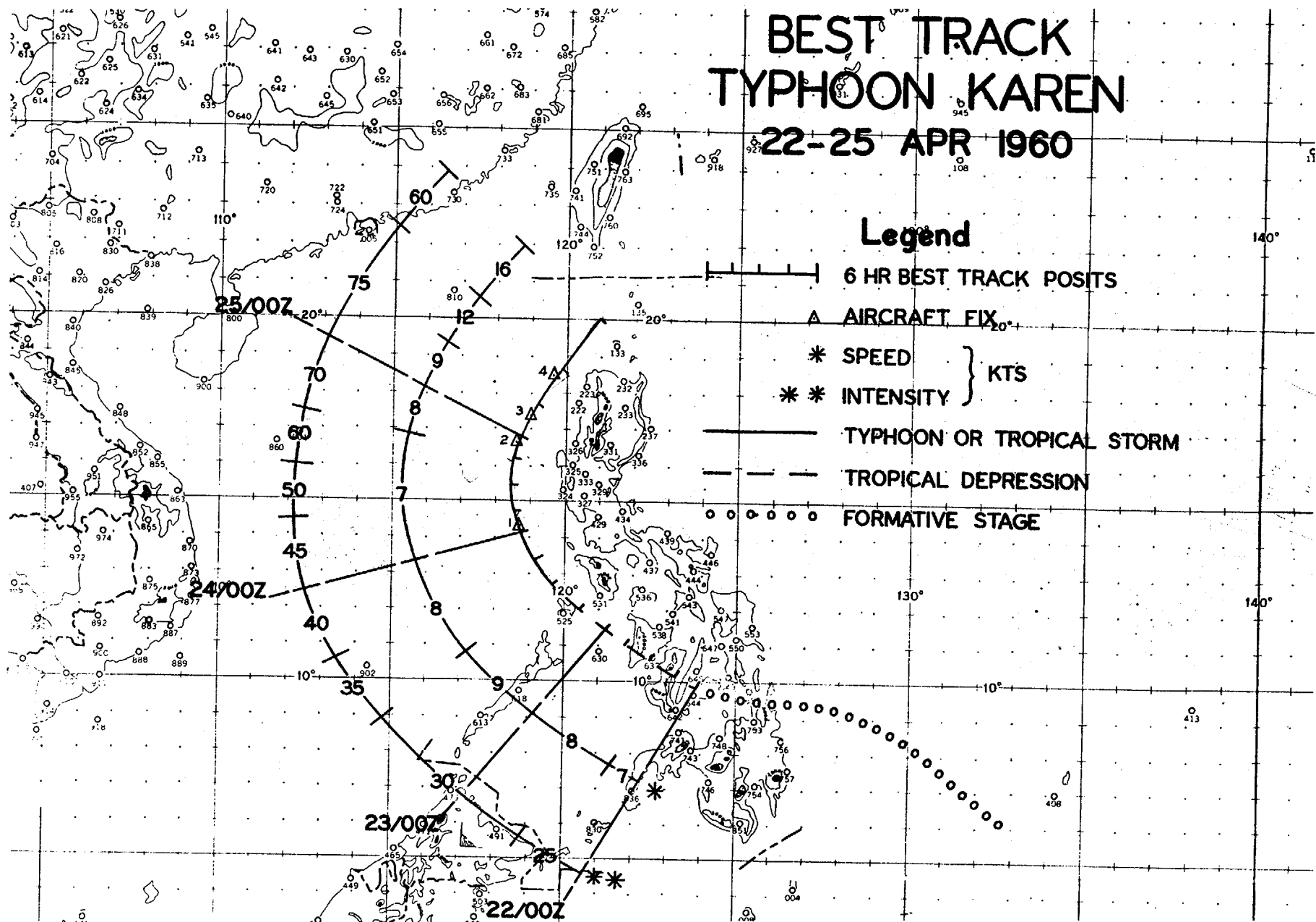
* SPEED
* * INTENSITY } KTS

—— TYPHOON OR TROPICAL STORM

- - - TROPICAL DEPRESSION

o o o o o FORMATIVE STAGE

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RECONNAISSANCE AIRCRAFT FIXES - TYPHOON KAREN

FIX NO.	TIME	LAT.	LONG.	UNIT METHOD & ACCY	MIN SLP MBS	MAX SFC WND	MIN 700MB HGT	MAX 700MB WND	700MB TT/Td (°C)	EYE CHARACTERISTICS
1	240100Z	14.2N	118.7E	56-P-05	996	45	10080 ⁹¹⁸	45	15/08	CIRC DIA 10 MI
2	242300Z	16.7N	118.8E	56-P-05	991	75	9980 ⁹¹⁵	60	18/10	CIRC DIA 08 MI
3	250300Z	17.3N	119.0E	56-P-05	988	75	9940 ⁹¹³	70	16/09	CIRC DIA 08 MI
4	251010Z	18.5N	119.7E	56-P- U	998	60	10140	50	17/11	SEMI-CIRC DIA 18 MI OPEN S

TYPHOON KAREN 22-25 APRIL 1960
POSITION AND FORECAST VERIFICATION DATA

DTG	STORM POSITION		24 HR. ERROR	48 HR. ERROR
	LAT.	LONG.	DEG. DISTANCE	DEG. DISTANCE
220000Z	09.8N	123.8E	- - - -	- - - -
220600Z	10.1N	123.2E	- - - -	- - - -
221200Z	10.5N	122.4E	- - - -	- - - -
221800Z	11.0N	121.8E	- - - -	- - - -
230000Z	11.5N	121.1E	- - - -	- - - -
230600Z	12.1N	120.4E	- - - -	- - - -
231200Z	12.7N	119.7E	- - - -	- - - -
231800Z	13.4N	119.2E	- - - -	- - - -
240000Z	14.1N	118.8E	- - - -	- - - -
240600Z	14.7N	118.6E	- - - -	- - - -
241200Z	15.4N	118.5E	- - - -	- - - -
241800Z	16.1N	118.6E	250-77	- - - -
250000Z	16.9N	118.8E	253-65	- - - -
250600Z	17.7N	119.2E	252-105	- - - -
251200Z	18.8N	119.9E	250-157	- - - -
251800Z	20.0N	121.0E	245-168	242-284
AVERAGE 24 HOUR ERROR			114 MI	
AVERAGE 48 HOUR ERROR			284 MI	

24 HR FORECAST POSITS TYPHOON KAREN 22-25 APR 1960

Legend

- - - - - 24 HR FORECAST POSITS
- | | | | 6 HR BEST TRACK POSITS

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25/00Z

24/00Z

23/00Z

22/00Z

413